



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/905,087	07/12/2001	Butrus T. Khuri-Yakub	A-69570/AJT	3514

7590

07/09/2002

FLEHR HOHBACH TEST ALBRITTON & HERBERT LLP  
Four Embarcadero Center, Suite 3400  
San Francisco, CA 94111-4187

EXAMINER

DICKENS, CHARLENE

ART UNIT

PAPER NUMBER

2855

DATE MAILED: 07/09/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/905,087

Applicant(s)

Khuri-Yakub

Examiner

DICKENS

Group Art Unit

2855

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- ☐ Responsive to communication(s) filed on \_\_\_\_\_
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 1-25 is/are pending in the application.
- Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 1-25 is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement

## Application Papers

- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some\* ☐ None of the:
  - ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_
  - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 6
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other \_\_\_\_\_

Office Action Summary

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1, 3 and 5-8, 15, 16 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by the Admitted Prior Art (APA). The APA (Figs. 1, 4) teaches a fluidic device comprising: a silicon base (11, 27), at least one capacitive ultrasonic transducer (16, 27) integrated in said base, and a top (12, 24), said top has its microgroove oriented over said transducer, to form a microchannel (14, 21) with the ultrasonic transducer in one wall of said channel; wherein the base is semiconductor

material and the ultrasonic transducer is micro machined in said material.

3. Claims 1, 3 and 5-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Degertekin et al. Degertekin et al. teach a fluidic device comprising: a silicon base (col. 5, lines 14-51), at least two capacitive ultrasonic transducer (Figs. 9, 12) integrated in said base, and a top (Figs. 9, 12), said top has its microgroove oriented over both of said transducers, to form a microchannel with the ultrasonic transducer in one wall of said channel; wherein the base (col. 5, lines 14-51) is semiconductor material and the ultrasonic transducer is micro machined in said material; in which said microgroove includes a compliant membrane 316 which is disposed opposite said ultrasonic transducer; a processor configured to process signals to and from said ultrasonic transducer and providing an output indicative of pressure; wherein the micro machined ultrasonic transducer is operated to mix or pump or measure fluids in the channel (col. 10, lines 36-42).

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary

skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.


5. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Degertekin et al. Claims differ with the recitation of a fluidic device in which the microchannel has dimensions in the range 1  $\mu\text{m}$  to 500  $\mu\text{m}$ . This serves the purpose of optimizing the functions of the transducer. Degertekin et al. does not provide any dimensions. However, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experiment. In re Swain et al., 33 CCPA (Patents) 1250, 156 F.2d 239, 70 USPQ 412; Minnesota Mining and Mfg. Co. v. Coe, 69 App. D.C. 217, 99 F.2d 986, 38 USPQ 213; Allen et al. v. Coe, 77 App. D.C. 324, 135 F.2d 11, 57 USPQ 136. In the instant case discloses the identical claimed apparatus and would thus experience optimization of the functions of the transducer.


Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have performed routine experimentation to arrive with the microchannel has dimensions in the range 1  $\mu\text{m}$  to 500  $\mu\text{m}$  for the purpose of optimizing the functions of the transducer.

Application/Control Number: 09/905,087  
Art Unit: 2855

Page 5

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Dickens whose telephone number is (703) 305-7047.

  
cd/dickens  
June 30, 2002

  
Benjamin R. Fuller  
Supervisory Patent Examiner  
Technology Center 2800